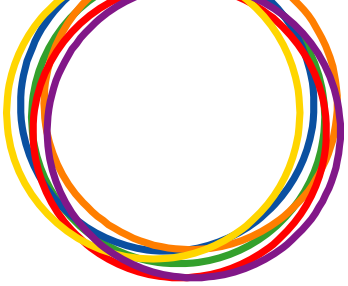
ALPHEUS



Alpheus Communications
Alpheus Data Services
1301 Fannin Street
20th Floor
Houston, Texas 77002

713-336-6565

March 17, 2011

By Electronic Filing

Ms. Marlene H. Dortch
Secretary, Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: ***Connect America Fund*, WC Docket No. 10-90; *A National Broadband Plan for Our Future*, GN Docket No. 09-51, *Establishing Just and Reasonable Rates for Local Exchange Carriers*, WC Docket No. 07-135, *High-Cost Universal Service Support*, WC Docket No. 05-337, *Developing an Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, *Lifeline and Link-Up*, WC Docket No. 03-109**

Dear Ms. Dortch:

Alpheus Communications, L.P. ("Alpheus") submits this *ex parte* letter to offer its comments on the potential revisions to the Commission's Universal Service Fund (USF) — in particular its impact on the Commission's goal of expanding the availability of broadband to rural America. The Commission's objective —bringing broadband services to rural areas in order to facilitate economic development, quality of life and access to remote healthcare — is both timely and noble. As you read this proposal I ask that you note at the outset that Alpheus is not a think tank or a policy group, but is a wholesale telecommunications provider in Texas that manages thousands of route miles of fiber in the field and provides direct broadband connections to hundreds of commercial customers over our network every day. Our comments are, therefore, sound from an economic and engineering perspective, because efficient delivery of broadband is what we do.

In the Commission's *Notice of Proposed Rulemaking*,[1] it sought comment on whether "to modify our universal service rules to provide additional support for middle mile costs."[2] The answer is definitively yes. As explained below, Alpheus believes that reducing middle mile costs is a reachable goal given that the facilities to provide such middle mile access are already deployed in the ground.

---

[1] *In the Matter of Connect America Fund*, WC Docket No. 10-90, Notice of Proposed Rulemaking, FCC 11-13 (rel. Feb. 9, 2011).

[2] *NPRM* ¶ 395.

The key fact to understand immediately is that a substantial number of existing fiber-optic cables already run through rural America. Of course, there are remote places with out any physical access to fiber, but along interstates and between the larger population centers, the presence of long haul fiber is the norm. The reason that this fiber doesn't serve many of the communities it runs beneath is that the cost of building an "off-ramp" or "drop-point" in telecom parlance, is usually in the mid-six figures, which generally exceeds the market opportunity in those communities. It would be a terrible shame if the Commission's new approach to facilitating the deployment of rural broadband ignored the presence of existing fiber networks and encouraged providers to dig up new trenches right beside the existing conduit to build redundant infrastructure in order to serve smaller communities. Instead, the fastest and most economic solution for expanding rural broadband in many situations is to subsidize the construction of drop points off of existing fiber. Consistent with the concern expressed in the NPRM that the Commission would seek to "ensure that support is provided for middle mile circuits that are offered on rates, terms, and conditions that are just and reasonable," Alpheus would propose that anyone who accepted that subsidy should have performance commitments and make an enforceable promise that all customers would receive nondiscriminatory rates and quality or service.

As the Commission considers the array of issues that surround bringing broadband to unserved and underserved rural communities, Alpheus urges the Commission to first consider utilizing existing facilities that already traverse many of the rural areas of our country. Using Alpheus as an example, we have fiber cable running from the northern most points in Texas down to the Mexican border. Along the way our network passes dozens of small communities that seek better broadband choices. This backbone fiber has already been built and paid for with Alpheus' private capital, and the same is true of all the adjacent monitoring and maintenance facilities necessary to operate our network.

We are often approached by various kinds of potential customers that would like us to build access points in rural communities to add or drop traffic. Needless to say, we would like to meet their needs — and have run the economics many times. Without some external factor or a dramatic technological change, the math simply doesn't work. Perhaps, solar power is a good equivalent analogy where one time public incentives have helped the market develop, because it's the initial spend that is the problem, not the ongoing economics. Alpheus respectfully suggests that the Commission use USF dollars to bridge that economic gap so that these unserved and underserved communities can obtain high speed broadband services from existing fiber networks.

When utilizing these existing facilities to expand broadband in rural communities, there are two issues the Commission should consider: 1) the cost of creating a community connection point to the existing fiber optic cable that already passes through or near these rural communities and 2) the operational costs of the ongoing systems and operational

support. Alpheus' research has determined, by analyzing its Texas footprint, that creating rural points of presence or "RPOPs", as well as clustering communities for purposes of ongoing systems and operational support present the most economic and robust solution for serving rural populations.

The goal of creating non-discriminatory community connection points as an on-ramp to existing high speed broadband networks could be realized by subsidizing the existing broadband network provider to establish rural points of presence or "RPOPs" in communities along the existing fiber route. This would require the broadband provider to open a splice point in its existing long-haul fiber-optic cable, splicing a lateral cable to an accessible fiber panel. The fiber panel essentially becomes the RPOP. The broadband provider can then make available carrier-grade, content and technology agnostic broadband to the communities that it serves, including DWDM, SONET, Ethernet and Access (1.5 to DS3). The RPOPs would be the interconnection point in the community where fiber to critical government, schools, libraries and community centers could be connected. The RPOP would lay the foundation for and guide the community to develop its own unique broadband footprint. It would spur private sector entrance into these rural locations while offering the municipalities the opportunity to plan its own unique broadband footprint over its entire community base. This model opens up opportunities for tele-medicine, remote schooling, community internet cafes, as well as wireless last mile solutions such as Wi-Fi and Wi-Max. These rural communities would have the opportunity to deploy NG911 services as well as have the tools to plan connectivity to and between schools, libraries, community centers and with other communities hospitals, colleges and universities. These RPOPs could also be used to bring high speed broadband access closer to rural cellular towers.

The second piece of the economic equation is subsidizing ongoing system and operational maintenance. The broadband provider should utilize existing network operations centers, OSS systems and support staff that were created and continue to be funded with private sector dollars. The rural communities should be provisioned in geographically logical clustered communities such that resources for systems and operations could be shared between rural locations in close proximity thus utilizing subsidized dollars most efficiently. At least initially, until sufficient demand is aggregated, operations should be subsidized to promote the proper incentive to the carriers to create the RPOP.

Alpheus' analysis in Texas found that there were thirty-six rural communities close to its fiber footprint where a splice point could be accessed to build a RPOP. Alpheus then consolidated these communities into six clusters. As an example, one of the clusters includes the rural communities between Corpus Christi and Houston, Texas. It includes the towns of Odem, Refugio, Goliad, Edna, El Campo, Taft, Gregory, and Aransas Pass, Texas. The towns share common characteristics. Many have twenty percent or more of the residents below poverty level. Some are without hospitals or even health clinics.

Many describe the major jobs as construction, food service or health care. Most have some sort of community or government center, and some level of schools and libraries. Several towns are the county seats. The median income is around $31,000 with the median age in the mid-thirties. The average population is 4,300 residents. Not only does the cluster community concept work for economic reasons, there could be shared needs among these communities such as the need for computer literacy training, tele-medicine for the community, or needs of the school systems to share resources.

Despite the commonality of interest among these communities, the economics, without government support, would not support the "cooperatively developed regional networks to provide lower cost, higher capacity backhaul capability" referenced in the *NPRM*.[3] Only by filling in the gap using USF support would the Commission provide the "incentive[] for small carriers to continue to seek such efficiencies."[4]

There are some that suggest that cable modem and DSL service provided by the incumbent is broadband enough for rural communities. Alpheus believes that bringing DSL, cable modems and satellite to rural communities is a stop gap measure that will still leave these communities light-years behind the affluent metropolitan areas of our country. Subsidized dollars should be spent on systems and facilities that will accommodate next generation capabilities. For example, Alpheus has one employee that works from a rural town in Texas of approximately 13,000 people. With no cable service available, DSL is the only option for this employee. The DSL speeds, however, are so sluggish that video over the internet is too slow to be effective. Download speeds run at times as slow as 30 kbps. The employee experimented with satellite service but the inability of satellite to utilize peer to peer networking did not allow connection to the company LAN which made the broadband connection useless for business purposes. Anything short of broadband at speeds capable of delivery of streaming video and full functionality on peer to peer networking is unacceptable and unworthy of universal service investment in the long term.

Rural communities are literally sitting on top of some of the most robust broadband networks available in our country. Alpheus urges the commission to utilize existing high speed broadband infrastructure present in rural America prior to subsidizing new fiber build-outs which will duplicate current facilities. The use of existing facilities will also respect private property rights that are necessarily disrupted in any right of way based infrastructure construction. The backing of RPOPs on currently existing facilities will give unserved and underserved communities access to the same high speed internet capabilities available to urban citizens.

---

[3] *See NPRM* ¶ 395.

[4] *Id.*

Sincerely,

Paul W. Hobby

Paul W. Hobby
CEO
Alpheus Communications, L.P.

Cc: Zachary Katz
Margaret McCarthy
Christine Kurth
Angela Kronenberg
Brad Gillen
Sharon Gillett
Carol Mattey
Christi Shewman
Rebekah Goodheart
Jennifer Prime